

Oxygen Concentrator use at Home – Zen-O

Parent/Carer information sheet

What is an Oxygen Concentrator machine?

An Oxygen Concentrator is an electrical device that extracts oxygen from the air. It allows oxygen to be passed through nasal prongs and provides oxygen to your child. The Children's Hospital in the Home (CHITH) uses the Zen-O Oxygen Concentrator.

For additional instructions please scan the QR code to watch Zen-O "instruction video for patients".



Safety in the home

- Keep the Zen-O away from naked flames and sources of heat
- Keep internal doors open while oxygen is in use to help ventilate the room
- Do not smoke around Zen-O and ensure smoke alarms are in working order
- Ensure the Zen-O does not get wet
- Ensure air intake vent and exhaust vents are clear
- Do not use aerosol sprays such as Glen-20, hair spray or deodorant near the Zen-O
- Do not plug Zen-O into a power board, plug directly into a wall socket

When to seek help

Follow the Family Action Plan and call an ambulance if required. If your child does not need ambulance but their condition has changed contact the CHITH nurse or after hours call the Children's Ward Team Leader.

You should seek advice if your child

- Develops fast or laboured breathing, irregular or slow breathing
- Seems very lethargic, becomes pale or sweaty or begins to look blue in the skin
- Pauses between breaths for longer than usual
- Develops wheezing sound when breathing
- Any other concerns e.g. fevers

How to use Zen-O

Connect nasal prongs or extension tubing to nasal prong port. To turn the device on, press the power button. The concentrator will chirp, and the lights will flash. Apply the nasal prongs to your child if not already applied. The flow of oxygen should commence automatically at the previous rate usage rate.

Please do not change Zen-O setting unless instructed by the CHITH team.



Alarms

Always – check your child is OK first before troubleshooting the Zen-O.

If the Zen-O detects an issue, it will indicate the alarm visually and audibly within 10 seconds.

Alarm Message	Description	Action
Charge battery	Battery needs charging.	Recharge the battery pack by plugging into the power supply. Ensure all connections are made securely
Invalid batt.	Battery is not an approved battery	Contact nurse
Check vents	Device is unable to maintain oxygen purity	Be sure air vent has not been blocked. If alarm persists, contact nurse.
Low battery	Estimated battery life less than 17 minutes.	Charge the battery pack by plugging in to power supply
Check cannula	No breath detected for 60 seconds from the nasal cannula	Check child is OK. Likely disconnected nasal prongs. Check taping and positioning of the nasal prongs.
Low flow	Continuous flow of oxygen is below specifications	Check that nasal prong tubing is not kinked

Batteries

The battery button allows you to check the status of the batteries. The Zen-O can always be used when directly connected to a power source. However, the concentrator also has a rechargeable battery.

Once completely charged, the device can run for one and a half (1.5) hours at 2L continuously with two batteries. When not moving around the home keep the power supply attached and on to keep battery fully charged in the event of a power interruption.

Please only power machine down when instructed by CHITH team. If for any reason the Zen-O turns off or needs to be restarted, the prescribed oxygen amount will remain the same as when it was turned off.

Nasal prongs

The nasal prongs must stay in your child's nose so that they can breathe in the oxygen. Regularly check the nasal prongs are in the correct position and adjust them if needed. Ensure nasal prongs are not sitting against the side of the nostrils as this may cause a pressure area.

The nasal prongs should be positioned so that they point upwards and towards the back of the nose. The nasal prongs are secured in place with soft tape on your child's face.

During your CHITH visit the nurse will review the taping of the nasal prongs and assist you to resecure them if needed. In between visits you can change the white tape or reinforce it to keep them secure.

If you need to completely change the tapes:

Step 1:

First cut the skin protective dressing and white tape to the required size. Rounding the corners to protect the eyes. Gently remove the old tapes, check for any signs of redness or skin breakdown on nose and surrounding skin.



Step 2:

Clean and dry your child's skin then apply the skin protective dressing (Comfeel) under the nasal prongs



Step 3:

Apply the white tape (Hypafix) over the top of the nasal prongs to secure them onto the face



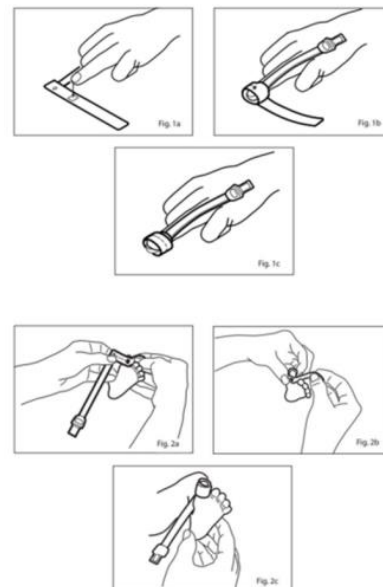
If your child also had a nasogastric tube, please ensure that you keep a hold of the tube at the nostril when removing old tape to prevent it coming out. Re-tape the nasogastric tube first and then apply nasal prongs over the top and apply more white tape.

If the prongs become blocked due to excessive mucous, change prongs and let CHITH nurse know so that additional supplies can be provided with your next CHITH visit.

Oximetry

How to check your child's oxygen saturation readings

1. Attach the sensor to foot, toe, or finger
2. Connect sensor to the oximeter cable
3. Turn the oximeter machine on (it will take a few moments to start working)
4. If your child is moving about, wait for them to settle and then watch the oxygen saturation reading for 5 minutes (movement will affect the reading)
5. If the oxygen saturation is 92% or higher over the 5 minutes, turn off the oximeter and remove the sensor
6. If the oxygen saturation is 91% or lower leave the sensor on and call the CHITH nurse



When to check your child's oxygen saturations measurements

Your child should have their oxygen saturation measurements taken 4 times a day

- During the CHITH nurse home visit
- During the CHITH telehealth call
- Parent/carer check and record during the day when your child has a sleep/nap or rest
- Parent/carer check and record in the late evening/night when your child has fallen asleep (before parent/carer goes to bed at night)

Contact details

Children's Hospital in the Home nurse (07.30 - 4.00pm)	0438 897 684
<i>Alternatively, if you are unable to contact the above number:</i>	
Children's Hospital in the Home secondary number (07.30-4.00pm)	0409 453 371
Team Leader Children's Inpatient Unit (overnight)	07 5687 1238

Date	Time	Oxygen LPM	Oxygen Saturation %	Breathing effort	Alertness	Breathing sounds	Skin Colour	Other comments

Oxygen LPM - Check the top of the display on the Zen-O which show the litres per minute (LPM). The screen will show LPM – record the number shown.

Oxygen Saturation % - Use your monitor provided by CHITH and write the SpO2 – for example 93%

Breathing Effort - How hard your child is working to breathe? For example change in ability to talk, eat and play, breathing rate, using extra muscles, flaring nostrils, head bobbing, sucking in between ribs. Are they better or worse from the last time you saw the nurse?

- Better – improved breathing effort from last nurse assessment
- Same – no changes from last nurse assessment
- **Worse – more breathing effort than last nurse assessment – contact CHITH nurse or Team Leader for advice.**

Alertness - Whether the child is awake, drowsy, difficult to wake, irritable/agitated or asleep.

Breathing Sounds – Can you hear any unusual sounds when your child is breathing? For wheezing, grunting, coughing, congested/phlegmy or stridor/croupy

Colour - Skin colour – is it normal, pale, mottled, or blue?

Other Comments - Anything extra worth noting – temperature, position, mood, able to eat and drink.

If your child has any deterioration of symptoms, please contact the nursing team for advice and follow Family Action Plan.